

Listing of Claims:

We claim:

Claim1. (Currently amended). ~~While a conventional Dissolved Air Flotation treatment of water for drinking or for any other purpose from polluting agents or contaminants comprises:~~

~~a. an optional addition of surfactants-promoters of flotation to said water aimed to stabilize future gas bubbles~~

~~b. an addition of surfactants to said water
said addition aimed to stabilize later formed within said water gas bubbles~~

~~c. an appearance and growth of small gas bubbles within said water
caused by a change of pressure within said water and~~

~~said small gas bubbles originate from dissolved gas molecules
present in either said water or a part of water added to said water~~

~~d. a stabilization and stop of growth of said small gas bubbles caused by
said surfactants adsorption~~

~~e. a collection of contaminants by an adhesion to stabilized said small gas bubbles~~

~~f. a slow rise of stabilized said small gas bubbles with attached said contaminants
to a top of said water~~

~~g. a froth formation on said top of said water
said froth containing collected and removed from said water contaminants~~

~~h. an eventual removal of said froth for further treatment~~

~~wherein a A claimed method of water treatment from polluting agents or
contaminants for drinking or for any other purpose emits an addition of surfactants
to said water aimed to stabilize later formed within said water gas bubbles and
by non-stabilized gas bubbles and comprises:~~

~~[[j]] a. an optional addition of surfactants-promoters of flotation to said water~~

~~[[i]] b. an appearance and growth of small gas bubbles within said water
caused by a change of pressure within said water and
said small gas bubbles originate from dissolved gas molecules
present in either said water or a part of water added to said water~~

a formation of small gas bubbles within
said water caused by a pressure change within said water

said small gas bubbles are formed from dissolved gas molecules present in
either a whole of said water or some volume of water added to said
treated water

[[k]] c. a collection of said contaminants by an adhesion to said small gas bubbles

d. a further growth of said small gas bubbles with attached said contaminants
caused by collection of new gas molecules

[[l]] e. a simultaneous with growth fast rise of continuing to grow these
initially small gas bubbles with said contaminants attached to a top of
said water
wherein said gas bubbles decay and release said contaminants

[[m]] f. an accumulation of said contaminants within a top water layer

whereby comparing to a Dissolved Air Flotation (the DAF) the claimed method:

substantially decreases an overall cost of water treatment
because the contaminants are removed ~~from a bulk of the treated water~~ without
surfactants addition ~~while these surfactants addition contributes a major part of water
treatment cost~~

and overcomes a productivity problem of the DAF method thus allowing to treat large
volumes of water ~~because of the continuation of growth of said gas bubbles and their
rapid rise to the surface.~~

Claim 2. (Canceled)

Claim 3. (Canceled)

Claim 4. (Canceled)

Claim 5 (Original). A process as it is claimed by the Claim 1 wherein
said top water layer enriched with said contaminants is separated and removed
from a main body of said water for further treatment by any known method.

Claim 6 (Original). A process as it is claimed by the Claim 1 wherein
accumulated within said top water layer contaminants further aggregate
together and later said aggregated contaminants return to said water

whereby making a process of said water further treatment easier.

Claim 7 (Previously presented). A process as it is claimed by the Claim 1 wherein accumulated within said top water layer said contaminants further aggregate together and said top water layer is later removed with these aggregated contaminants for further treatment by any known method.

whereby making a process of said top water layer further treatment easier.

Claim 8 (Previously presented). A process as it is claimed by the Claim 1 wherein accumulated within said top water layer said contaminants further aggregate together and these aggregated contaminants continue to grow in size until eventually large flocks of contaminants are formed

said flocks of contaminants further precipitate to either a bulk of said water or at least partly to a bottom of said water forming a precipitate at the water bottom

and said flocks or precipitate or any combination of said flocks and precipitate are later removed by any known method from either a bulk of said water or from said water bottom or both from the bulk and said water bottom for further treatment.

Claim 9 (Canceled).

Claim 10 (Canceled).

Claim 11. (Canceled)

Claim 12 (Canceled).